

## **Exhibit B**

03-0953

# INVENTION DISCLOSURE

RECEIVED

## 1. INVENTOR(S):

Bret K Street  
James M Derderian  
Jeremy E Minnich

## 2. DESCRIPTION:

### • Title:

Method of manufacturing an image sensor using a modified transparent lid.

### • Brief Description:

The invention calls for the use of surface transition edges in a transparent lid to reduce, control or eliminate the issues caused by capillary action. The glass lid, which is placed over a semiconductor package, is scribed, cut, etched or built up to a desired depth to create a surface transition capable of breaking the capillary action on the liquid.

-Transition points can window the critical sensor area

-Adhesive can be placed on lid or on the wires prior to lid attach

-Common description is a trench or firewall

## 3. CONCEPTION & DOCUMENTATION OF INVENTION:

### • Date when first conceived:

[REDACTED]

### • To whom was the idea first described:

Eschrock, Jreeder

### • On what date:

[REDACTED]

### • Date of the first tangible record:

[REDACTED]

### • Type and location:

Idea documented in Inventor Notebook 0100223. [REDACTED] (Jeremy Minnich) Idea first tested on [REDACTED] with desired results. Pictures of testing taken using microscope. (Copy included)

## 4. INFORMATION RELATED TO INVENTION:

- **Related invention disclosures:**

United States Patent 6,566,745 Beyne , et al. May 20, 2003 (Copy Included)

- **Closest technology:**

Have heard that at least one manufacturer is using UV light to stop the flow of material.

- **Advantages of this invention over previous technology:**

Issues that lead to this invention.

- Placing a glass lid on a liquid introduces capillary forces that make control of the liquid difficult. The liquid will often wet into the critical sensor array.

- Setting the liquid with an initial gel creates a double process step.

- Materials that do not wet into the critical sensor array are very viscous and tend to create wire issues and voiding.

This invention allows:

- A single run process at Lid Attach (Adhesive apply, Lid Attach, UV Cure)

- Process allows for low viscosity materials that decrease possibility of voiding

- Process allows the part to be made with a very clean adhesive line, which is controlled and cosmetically desirable.

- Process allows the lenses to self-level and the cut area creates a vent, which eventually seals as the material runs along the transition edge.

## **5. IMPORTANT DATES:**

- If the invention has been disclosed outside the company, please specify to whom it has been disclosed, when, and in what form:

This specific detail of the package has not been disclosed outside the company.

- If any articles describing your invention have been published, please specify the author(s), title of article, publication and date:

None

- If any engineering samples have been given out, please specify to whom and on what date they were given:

Sample were given out to engineering managers and supervisor for review on [REDACTED]

- If any product using the invention has been sold or offered for sale, please specify to whom and on what date:

None

6. DISPOSITION OF THE INVENTION:

- When will (or did) Micron begin use of the invention experimentally:

Experimentation began on [REDACTED] Continued work on placement and manufacturing continues.

- When will (or did) Micron begin production of this invention:

Initial live die builds scheduled for [REDACTED]

7. MISCELLANEOUS INFORMATION:

- ARPA project:

- Was the invention developed during a joint development agreement or other contract with an outside company:

No

- List developmental work outside of the company, including Government proposal or contract:

None

- This disclosure originated from work on the project:

None

- Has the subject matter of this disclosure been disclosed to any standards setting organization(JEDEC;IEEE;etc.):

No

8. INVENTORS:

•  
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Supervisor : Ed Schrock


Signature : Bret K Street

Date : [REDACTED]

•  
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Supervisor : Dan Pfankuch

Signature : *[Signature]*


Date : 

(All inventors must sign and date this disclosure form before it can be accepted)

9. WITNESS:

A witness should sign and date this disclosure. A witness in this case is a non-inventor who understands the nature of the invention and can corroborate the inventor(s) conception of the invention.

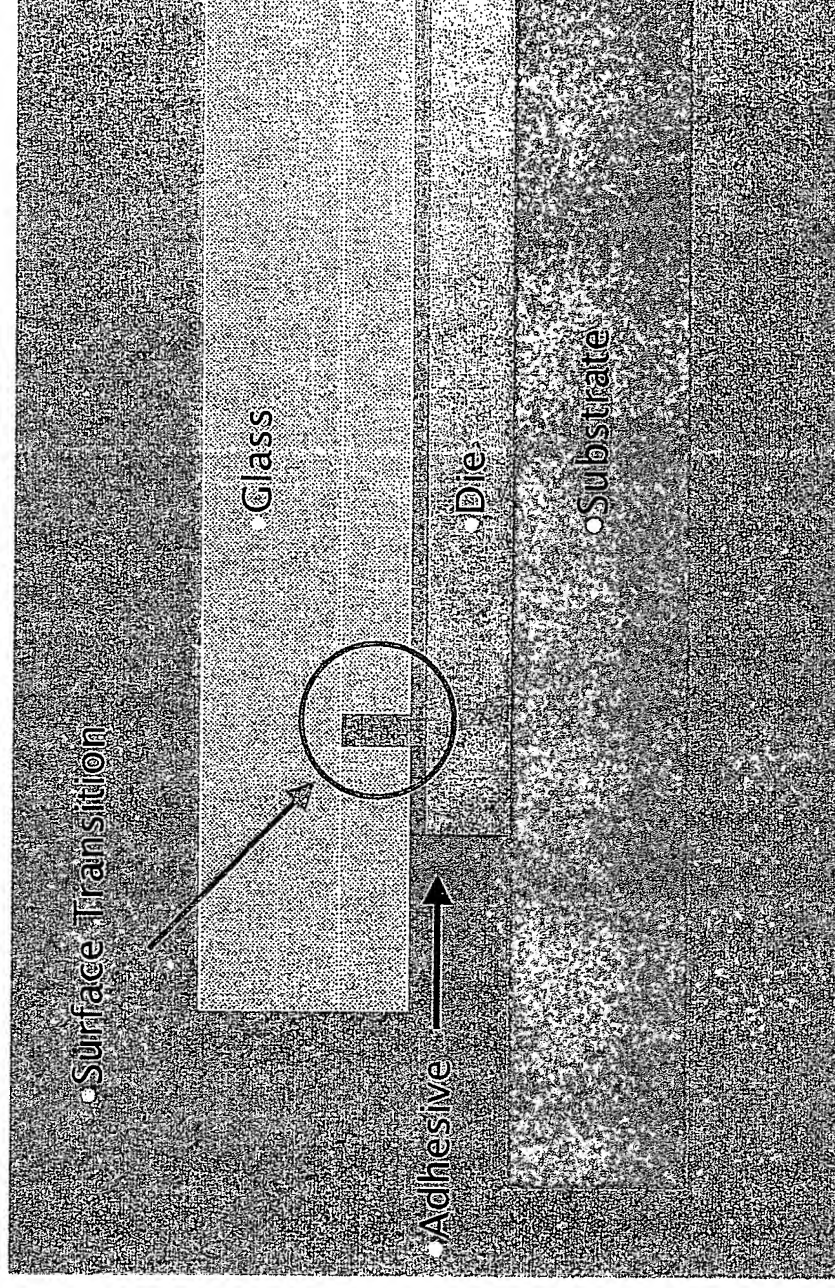
*[Signature]*  
( Signature of Witness )

  
( Date )

Note: If you have any questions or you need assistance completing this form, please call the Patent Department, ext. 84520.



# Lenses Modification Profile:



Notebook # 0100223

Project Number

Subject

Date

1

1

CMOS  
I/O

5

CSP CMOS  
ON  
DATA COM 2

10

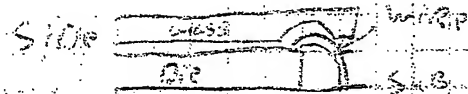


15



Please do not

25



30

Why?  
NEED TO PLACE A GLASS I/O ON TOP OF A DIE AND WIRE USING  
EPOXY BUT DON'T GET ANY EPOXY ON THE DIE

35

STOP EPOXY FROM FLOWING ON TO THE IMAGE DIE  
CUT OUT SMALL CHANNELS ON ALL 4 SIDES OF GLASS I/O THAT WILL  
BE PLACED ON TOP OF DIE AND WIRES  
(PLACE EPOXY ON WIRES AND THEN PUT THE I/O ON)  
(PLACE EPOXY ON CHANNELS OF THE I/O THEN PLACE ON TOP OF DIE)  
SO THE EXTRA EPOXY WILL FLOW TO THE CHANNELS AND  
OUT THE SIDE AWAY FROM THE DIE  
CUT THE CHANNELS THE SAME SIZE OR LARGER THAN THE WIRE  
LOOPS AND PLACE THE CHANNELS WITH EPOXY ON TOP OF WIRES

40

Author's Signature: *[Signature]*

Date: *[Redacted]*

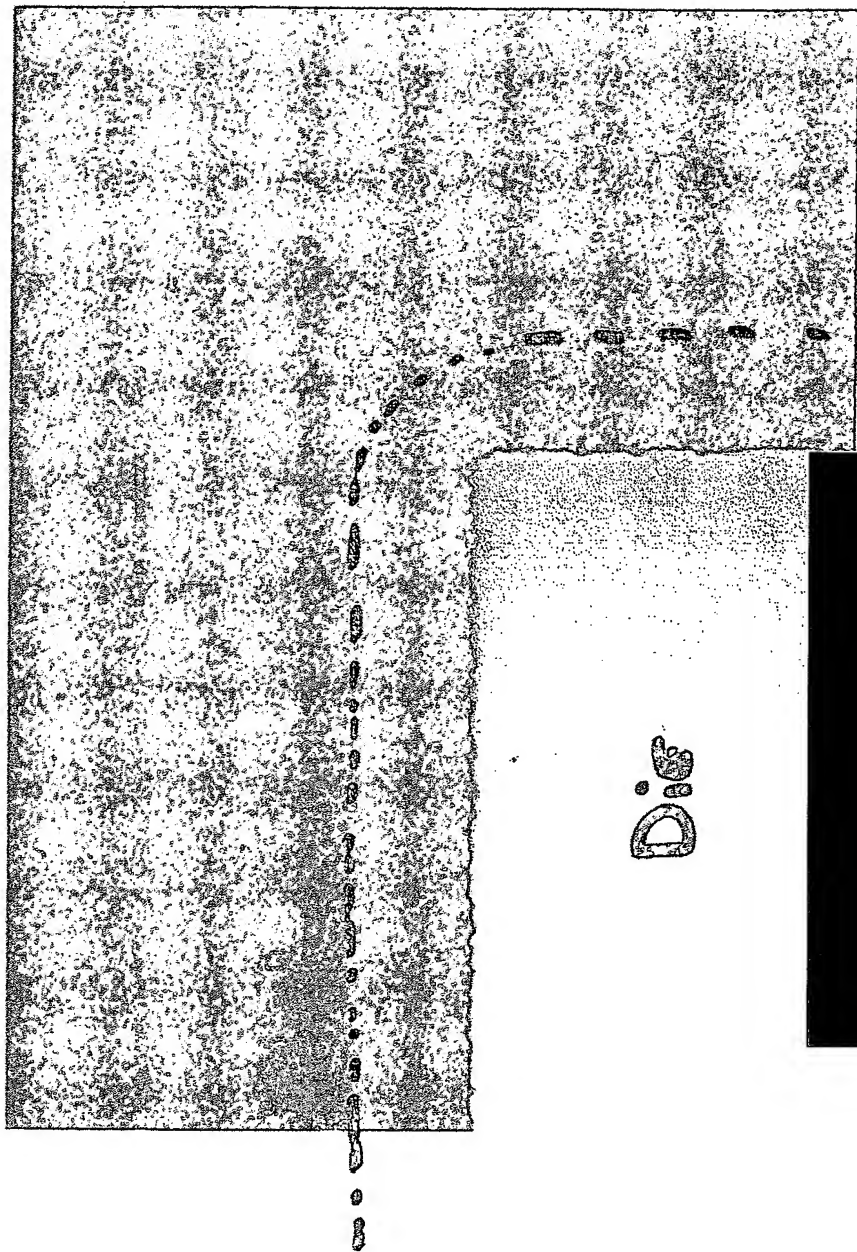
Witness' Signature: *[Signature]*

Date: *[Redacted]*

(Read and Understood)

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D



Die

! Adhesive Line